



# PUMA V400P

High Productivity Vertical Turning Center



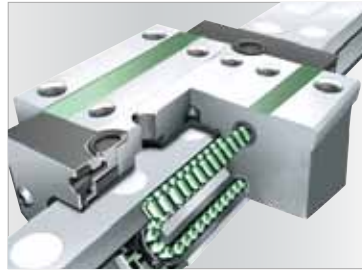
Doosan Machine Tools

*Optimal Solutions for the Future*

# PUMA V400P

PUMA V400P is vertical turning center that has maximized productivity & serviceability, using roller type LM guide for all axis, so increased rapid traverse, acceleration and deceleration.

## Rigid structure for improving productivity



Roller type LM guide and upgraded servo motor, based on meehanite cast iron bed with rigid heavy-rib structure, optimized for improving productivity

Rapid Traverse (X / Z axis)

**24 m/min**

Power of axis motor

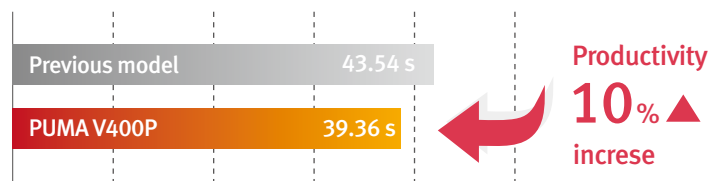
X axis **3 kW**  
(4.0 Hp)

Z axis **7 kW**  
(9.4 Hp)

## Ther result of increasing productivity

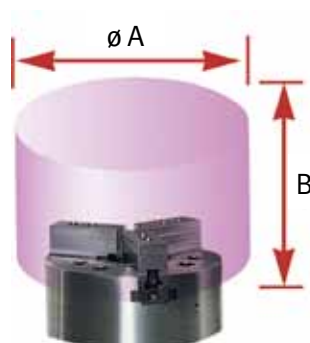


### Machining time for brake disc



\* Test reslut by own standard.

### Machining range



**A** : Max. turning diameter

**496 mm**  
(19.5 inch)

**B** : Max. turning length

**461 mm**  
(18.1 inch)

## Main Spindle



The cartridge type spindle with A2#8 spindle nose assures high capability and easy of maintenance. Especially rigid coupled bearing assembly is to support heavy weight workpiece and reduces thermal growth in long run operation.

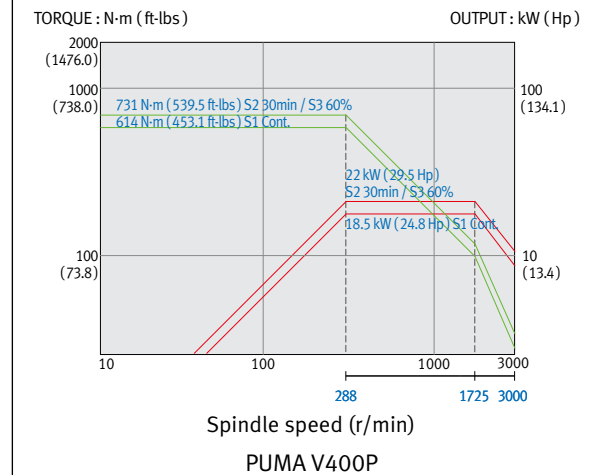
Max. spindle speed

**3000 r/min**

Spindle motor power (30 min)

**22 kW (29.5 Hp)**

### Spindle power-torque diagram



## Turret



Index time  
(1-station swivel)

**0.15 s**

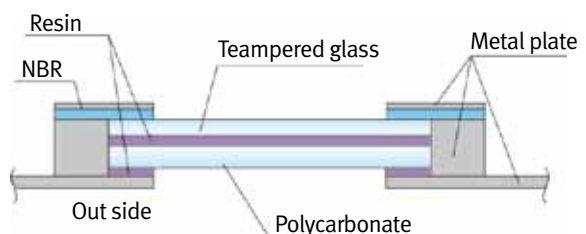
No. of tool station

**12 ea**

The large 12 station heavy duty turret features a large diameter Curvic coupling and heavy duty design with unsurpassed rigidity. Turret rotation, acceleration and deceleration are all controlled by a reliable high torque servo motor.

Unclamp and rotation are virtually simultaneous. Its fast index response reduces the total cycle time Double-

## Safety Design



The operator safety can be enhanced through the front door with its shock absorbing laminated glass and double panel construction. The windows without grating also provide a clear view of the machine inside.

# Machine Specification

Feature			Unit	PUMA V400P
Capacity	Swing over bed		mm (inch)	610 ( 24.0)
	Swing over saddle		mm (inch)	500 ( 19.7)
	Recom. Turning diameter		mm (inch)	305 ( 12.0)
	Max. Turning diameter		mm (inch)	496 ( 19.5)
	Max. Turning length		mm (inch)	461 ( 18.1)
	Chuck size		mm (inch)	305 ( 12)
Travels	Travel distance	X-axis	mm (inch)	268 ( 10.6)
		Z-axis	mm (inch)	488 ( 19.2)
Feedrates	Rapid Traverse Rate	X-axis	m/min	24 ( 0.9)
		Z-axis	m/min	24 ( 0.9)
Main spindle	Max. Spindle speed		r/min	3000
	Spindle nose		ASA	A2-8
	Spindle bearing diameter ( Front )		mm ( inch )	130 ( 5.1 )
	Spindle through hole		mm ( inch )	90 ( 3.5 )
Turret	No. of tool stations		ea	12
	OD tool size		mm ( inch )	25 x 25 ( 1.0 x 1.0 )
	Max. boring bar size		mm ( inch )	50 ( 2.0 )
	Turret Indexing time ( 1 station swivel )		s	0.15
Motors	Main spindle motor power ( 30min./ cont. )		kW ( Hp )	22 / 18.5 ( 29.5 / 24.8 )
	Coolant pump motor power		kW ( Hp )	0.4 / 0.9* / 1.5* / 2.2* / 3.7* / 5.5* / 7.5* ( 0.5* / 1.2* / 2.0* / 3.0* / 5.0* / 7.4* / 10.1* )
Power source	Electric power supply ( rated capacity )		kVA	42.2
Machine Dimensions	Length		mm ( inch )	1455 ( 57.3 )
	Width		mm ( inch )	2075 ( 81.7 )
	Height		mm ( inch )	3210 ( 126.4 )
	Weight		kg ( lb )	6000 ( 13227.5 )
NC system				DOOSAN-FANUC i

\* options

## Standard Feature

- Coolant supply equipment
- Full enclosure chip and coolant shield
- Hand tool kit, including small hand tool for operations
- Hydraulic chuck & actuating cylinder
- Hydraulic power unit
- Leveling jack screw & plates
- Lubrication equipment
- Soft jaws (total)
- Standard tooling kit (tool holders & boring sleeve)
- Work light

## Optional Feature

- Air blast for chuck jaw cleaning
- Automatic door
- Automatic door with safety device
- Chip conveyor & Chip bucket
- Coolant flushing
- Dual chucking pressure
- Hardened & ground jaws
- Manual tool presetter
- Oil skimmer
- Signal tower (yellow, red, green)
- Proximity switch for chuck clamp detection
- Special chucks



<http://www.doosanmachinetools.com>

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- The specifications and information above-mentioned may be changed without prior notice.  
 - For more details, please contact Doosan.